

# Computer Troubleshooting (30-assignment)



This is an integrated instructional module designed specifically to operate within a Modular Program environment. It is ideal for use with our Scantek Technology or IT2020 Information Technology programs. It includes a 10-assignment exploratory curriculum and a further 20-assignment in-depth curriculum. The exploratory curriculum and the in-depth curriculum are each split into two parts. Each part includes a pre-test and post test. The module includes software and curriculum materials sufficient to provide a complete learning experience.

The curriculum incorporates continuous assessment through questions. When used in conjunction with a ClassAct networked management system, this provides instant feedback of student performance. The assessments begin with a comprehensive pre-test. This quiz includes questions for each subsequent assignment, together with questions that will specifically test math and reading ability.

Every assignment starts with a series of questions designed to track inventory. These ensure that any missing items are located before they are needed.

Each assignment is divided into a series of tasks. Hands-on tasks, based around an interactive 'virtual troubleshooting' system, introduce students to computer troubleshooting. These are accompanied by research tasks based upon illustrated textbooks and on-screen applications. Assessment questions are incorporated into each task.

## Exploratory Phase Topics:

- Troubleshooting printers
- Company policies and customer support
- Telephone support
- Troubleshooting tools
- Call tracking and asset management systems
- Preventative maintenance
- Hardware and software compatibility
- Service and warranty
- Troubleshooting techniques
- Policies
- Backing up data
- Software compatibility
- Troubleshooting CD-ROM drives
- Hardware and software requirements
- Computer viruses
- Knowledge bases and expert systems
- Asset management
- Dial-up networking

## Exploratory Phase activities:

- Solving a simulated computer problem.
- Investigating the difference in hardware and software faults.
- Exploring diagnostic programs.
- Exploring how hardware and software work together.
- Applying the problem solving technique to a new simulated problem.
- Providing telephone support using a simulation.
- Solving a simulated printer problem.
- Identify the hardware and software requirements for programs.
- Investigating customer support issues.
- Using a final simulation that encompasses all the aspects covered in the assignments.

## Advanced Specialization Phase topics:

- Fault finding methodology
- Safety and preventative maintenance
- Components of computer systems
- The startup sequence of a computer
- Error messages and POST error codes
- Testing computer systems
- Completing service report forms
- Operating system features
- Windows drivers and resource management
- Windows troubleshooting tools
- Locating hardware failures
- Computer power supplies
- Motherboards and form factors
- CPU and memory features
- Drive storage systems
- Expansion slots
- Software and operating systems
- Keyboard, mouse and input devices
- Monitor operation
- Computer sound systems
- Software and operating system configuration
- Common types of software applications

## Advanced Specialization Phase activities:

- Exploring software driver issues.
- Using diagnostic software.
- Identifying power supply problems.
- Resolving resource conflicts.
- Troubleshooting software problems.
- Troubleshooting hard disk drives.
- Troubleshooting floppy disk drives.
- Troubleshooting CD-ROM drives.
- Troubleshooting graphics cards.
- Troubleshooting memory.
- Troubleshooting motherboards.
- Troubleshooting sound cards.
- Troubleshooting monitors.
- Troubleshooting expansion slots.
- Troubleshooting CPUs.
- Troubleshooting keyboards.
- Troubleshooting mice.
- Troubleshooting operating systems.
- Troubleshooting the parallel port.
- Troubleshooting the serial port.
- Troubleshooting the USB port.
- Exploring types of software.
- Documenting problems and solutions.
- Using a multimeter.
- Troubleshooting devices in device manager.
- Exploring the control panel.
- Investigating cables and connectors.
- Investigating troubleshooting technique.
- Investigating POST errors.
- Investigating troubleshooting tools.

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Each assignment is designed around a list of performance objectives. These lists include academic, technical and occupational objectives. The assignments are written in such a way as to enable a student to attain the performance objectives, with the assessment questions linked to these in order to provide a measure of true competency.

The performance objectives are used by the ClassAct management system to generate a comprehensive portfolio of student competency reports. Default reports supplied with this module include:

- Entry report
- Technical/Occupational Exit report
- Basic Skills report based upon the federal SCAN's report.

**The items supplied with this instructional module include:**

- 10-assignment On-Screen Student Assignment Guide CD
- 10-assignment Student Workbook
- 10-assignment Instructor's Guide
- 20-assignment On-Screen Student Assignment Guide CD
- 20-assignment Instructor's Guide
- How Computers Work textbook
- PC Upgrading and Troubleshooting textbook

**Additional items required:**

- Computer

## Module Facts

For Technology Program, order as:  
ST650/30 Computer Troubleshooting

For IT Program, order as:  
ISS2C Computer Troubleshooting

	No.	Average time
Assignments	10	45 minutes
	20	90 minutes
Extension Activities	2	45 minutes
<b>Total</b>		<b>39 hours</b>



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